

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT E. SMITH, III

Appeal No. 1999-0067
Application 08/533,305

HEARD: MAY 5, 2000

Before ABRAMS, FRANKFORT and NASE, Administrative Patent Judges.

ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the decision of the examiner finally rejecting claims 18-21, 23-25 and 27-33. Claims 1-17, 22 and 26 have been canceled. No claims have been allowed.

The appellant's invention is directed to a hydraulic coupling. The claims on appeal have been reproduced in an appendix to the Brief.

Appeal No. 1999-0067
Application 08/533,305

THE REFERENCES

The references relied upon by the examiner to support the final rejection are:

Rudolph 1933	1,937,982	Dec. 5,
Espy <i>et al.</i> (Espy) 1956	2,730,380	Jan. 10,
Smith, III 1991	5,015,016	May 14,

THE REJECTION

Claims 18-21, 23-25 and 27-33 stand rejected under 35 U.S.C. § 103 as being unpatentable over Espy in view of Rudolph and Smith, III.

Rather than attempt to reiterate the examiner's full commentary with regard to the above-noted rejections and the conflicting viewpoints advanced by the examiner and the appellant regarding the rejections, we make reference to the Examiner's Answer (Paper No. 17) and the final rejection (Paper No. 14), and to the Appellant's Briefs (Papers No. 16 and 18).

OPINION

The test for obviousness is what the combined teachings

of the prior art would have suggested to one of ordinary skill in the art. See, for example, ***In re Keller***, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a *prima facie* case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See ***Ex parte Clapp***, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, ***Uniroyal, Inc. v. Rudkin-Wiley Corp.***, 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988).

According to the appellant, the hydraulic coupling of his invention is particularly effective when used in such applications as undersea drilling and production facilities, where both internal and external pressures on the couplings are very high and attaching them together is difficult. The

coupling comprises male and female members attached together with a compressed hollow metal seal interposed therebetween. As manifested in claim 18, the female member has a cylindrical receiving chamber with a first end and an internal circumferential shoulder, a helical groove in the receiving chamber, and a pair of slots extending from the first end to the helical groove. An axially compressible hollow ring-shaped metal seal is positioned in the internal shoulder, with a seal retainer connected to the female member to hold the seal in place. The male member has a cylindrical body with a leading face and a pair of projections extending radially from the body and dimensioned to slide within the slots in the female member until they reach the helical groove. The male member is rotatable ninety degrees with respect to the female member when the projections are in the groove, with this rotation urging the male member further into the receiving chamber and the leading face against the seal to axially compress the seal.

It is the examiner's view that all of the structure recited in claim 18 is disclosed by Espy "except for the use of a continuous camming surface on the male and female halves"

(Paper No. 14, page 2). The examiner has taken the position that Rudolph teaches the claimed bayonet connection, and that it would have been obvious to one of ordinary skill in the art to replace the conventional screw connection of Espy with a bayonet arrangement to reduce the amount of rotation needed to couple the members together. The examiner further opines that it would have been obvious to use a metal seal in view of the teachings of Smith, III "to improve the pressure capacity and reusability of the coupling" (Paper No. 14, page 3).

We do not agree that the combined teachings of these references establish a *prima facie* case of obviousness with regard to the subject matter recited in claim 18. Our reasons for arriving at this conclusion follow.

Espy discloses a coupler in which male and female members are connected together with an elastomeric seal in between. However, unlike the appellant's invention, in the Espy system the coupling members do not rotate with respect to one another during the coupling process. They are attached together by means of a separate rotatable threaded collar installed on the outside of the female member, which engages threads on the

outside of the male member and is rotated a number of times to pull the two members together. A flange on the outside of the male member limits the longitudinal displacement of the collar as it is rotated to control the extent to which the seal is deformed on compression. Insofar as the requirements of claim 18 are concerned, Espy fails to disclose or teach: (1) the slots and helical groove in the receiving chamber of the female member; (2) that the seal is hollow and of metal; (3) the projections extending outwardly from the male member and dimensioned to slide axially into the slots in the female member and then rotate in the helical groove; and (4) the male member being rotatable ninety degrees with respect to the female member when the projections are in the helical groove to axially compress the seal.

Rudolph discloses a coupling of the type in which a male member is received in a chamber in a female member "wherein the ends of two pipes or conduits may be temporarily placed in communication and a tight seal between said pipes established and maintained during the time they are in communication," such as when used to permit the injection of grease into the bearings of automobiles or other machinery (page 1, lines 3-

16). The principal objective of the Rudolph device is to provide a coupling that can accommodate a number of different male members (column 1, line 9 *et seq.*). This is accomplished by providing a cup-shaped casing 10 within which is received a reversible packing retaining member 12, which in turn can accommodate various male members such as those shown in Figures 4-9. Member 12 has the slots and grooves of a bayonet joint at one end and conventional screw threads on the outside of its other end. In the arrangement of Figure 1, member 12 is screwed into casing 10 in such a manner that the bayonet joint end is innermost and is inoperative insofar as attaching components together is concerned. In this orientation, member 12 connects to a male member "of the pressure-hold type," such as that shown in Figure 9, with the tapered washer 32 being "held firmly against the tapered end of the male nipple [49d]" (page 3, lines 63-94) by the application of "considerable pressure" by the user (page 4, lines 26-28). No mechanical connection, much less a bayonet joint, is utilized in this embodiment, in which the members are held together and the seal compressed by pressure applied by the user. As shown in Figure 3, female member 12 also can be installed so that the

bayonet joint is exposed for engagement by male members equipped with external means such as screw threads (25 in Figure 4) or pins (44 in Figures 5-8). However, this manner of attachment is disclosed only in a situation where the male member merely projects through the center opening in a packing washer (page 4, lines 1-4), and not where axial pressure is applied to a seal.

It is well established that the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See ***In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). In the present case, we fail to perceive any teaching, suggestion or incentive in Espy or Rudolph which would have led one of ordinary skill in the art to modify the Espy coupling in the manner proposed by the examiner. Granted, one of ordinary skill in the art would have explicitly been taught by Rudolph that a bayonet joint reduces the amount of rotation necessary to accomplish the act of coupling two members together by means of a rotative connection. However, from our perspective, applying this teaching to the Espy coupling would

result in replacing the conventional screw threads of coupling nut 24 with a bayonet arrangement having slots and helical grooves in the coupling nut and projections on the outer surface of male member 1, and not the claimed structure, which would be formulated only if the coupling nut were discarded and slots and helical grooves were placed on the inside walls of recess 32 of the female member. Considering that this would necessitate a substantial reconstruction of the structure of the Espy coupling and would result in an entirely different manner of operation, and that Rudolph does not teach using the bayonet joint option when a seal must be axially compressed during coupling, it is our opinion that suggestion for such a modification is found only in the luxury of the hindsight accorded one who first viewed the

appellant's disclosure. As stated by our reviewing court in *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992),

[i]t is impermissible to use the claimed invention

as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention" (citations omitted).

Consideration of Smith, III, which was cited for its teaching of utilizing an axially compressible hollow metal seal, does not alter our conclusion that the rejection of independent claim 18 should not be sustained.

Independent claims 19, 24 and 28 set forth the invention in somewhat different terms, but each includes elements that project radially from the male member and are received by a helical groove and slots in the receiving chamber of the female member. Therefore, for the same reasons as were expressed above with regard to claim 18, it is our conclusion that the teachings of the three applied references fail to establish *prima facie* cases of obviousness with regard to the subject matter recited in these claims and, it follows, of those which depend from them.

SUMMARY

The rejection of claims 18-21, 23-25 and 27-33 as being

Appeal No. 1999-0067
Application 08/533,305

unpatentable over Espy in view of Rudolph and Smith, III is
not sustained.

The decision of the examiner is reversed.

REVERSED

NEAL E. ABRAMS)	
Administrative Patent Judge)	
)	
)	
CHARLES E. FRANKFORT)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
JEFFREY V. NASE)	
Administrative Patent Judge)	

NEA/ki

Appeal No. 1999-0067
Application 08/533,305

Stephen D. Dellett
P. O. Box 4433
Houston, TX 77210-4433